The documentation and process conversion measures necessary to comply with this amendment shall be completed by 6 June 2001.

INCH-POUND

MIL-S-19500/274C
AMENDMENT 1
6 March 2001

MILITARY SPECIFICATION

SEMICONDUCTOR DEVICE, NPN, SILICON, TRANSISTORS
TYPES 2N910, 2N910S, 2N911, 2N911S, 2N912, AND 2N912S, JAN AND JANTX

Inactive for new design after 7 June 1999.

This amendment forms a part of MIL-S-19500/274C(ER), dated 5 January 1995, and is approved for use by all Departments and Agencies of the Department of Defense.

PAGE 1

1.4, delete and substitute:

"1.4 Primary electrical characteristics. Characteristics apply to each transistor in the array.

Type (1)	h_{FE} at V_{CE} = 10 V dc				h_{fe} at V_{CE} = 5 V dc				$\lvert h_{fe} \rvert$ V_{CE} = 10 V dc I_C = 50 mA dc f = 20MHz	
	h_{FE1} I_C = 0.1 mA dc		h_{FE2} I_C = 10 mA dc		h_{fe1} I_C = 1 mA dc		h_{fe2} I_C = 5 mA dc			
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
2N910	35		75	300	76	200	80	200	3.0	10.0
2N911	20		35	140	36	90	40	100	2.5	9.0
2N912	10		15	60	18	40	20	50	2.0	8.0

"

PAGE 3

1.4, delete and substitute:

"1.4 Primary electrical characteristics. - Continued.

Type	NF		h_{ib2}		h_{ob1}		h_{ob2}		$V_{BE(sat)}$		$V_{CE(sat)}$		C_{obo}	
	f = 1kHz see note 1 V_{CE} = 10 Vdc I_C = .3 mA dc		V_{CE} = 5 Vdc I_C = 1 mA dc		V_{CE} = 5 Vdc I_C = 1 mA dc		V_{CE} = 5 Vdc I_C = 5 mA dc		I_C = 10 mA dc I_B = 1 mA dc		I_C = 50 mA dc I_B = 1 mA dc		100 kHz ≤ f ≤ 1MHz V_{CE} = 10 V dc I_C = 0 mA dc	
	Min dB	Max dB	Min S	Max S	Min µmhos	Max µmhos	Min µmhos	Max µmhos	Min V dc	Max V dc	Min V dc	Max V dc	Min pF	Max pF
2N910		12	20	30		.4		.6	.6	.8	.	1		15
2N911		15	20	30		.4		.6	.6	.8		1		15
2N912		18	20	30		.4		.6	.6	.8		1		15

(1) Test circuit conditions: R_g = 510, power bandwidth = 200 Hz. Characteristics apply to "S" suffix also."

PAGE 4

4.3. step 11, delete 'h_{FE3}" and substitute "h_{FE2}".

PAGE 5

4.4.1, delete: "The following test conditions shall be used for $Z_{\theta JC}$ in group A, subgroup 2 inspection."

PAGE 6

TABLE I, subgroup 2, breakdown voltage, collector to emitter, second inspection, symbol column, delete "$V_{(BR)CEO}$" and substitute "$V_{(BR)CER}$".

PAGE 7

TABLE I, subgroup 3, low temperature operation, conditions column, delete "T_A = +125°C" and substitute "T_A = -55°C".

TABLE I, subgroup 4, small-signal short-circuit, method 3206, symbol column, delete "h_{fe2}" and substitute "h_{fe1}".

TABLE I, subgroup 4, magnitude of common emitter, limits column, delete the $|h_{fe}|$ values "3" in min column, and "10" max column.

PAGE 8

TABLE I, subgroup 4, small-signal open-circuit, method 3216, symbol h_{oe}, units column, delete the "µohms" three places and substitute "µmhos" three places.

TABLE I, subgroup 4, small-signal short-circuit, method 3201, symbol h_{ib1}, conditions column, delete "V_{CE}" and substitute "V_{CB}".

TABLE I, subgroup 4, small-signal short-circuit, method 3201, symbol h_{ib2}, conditions column, delete "V_{CE}" and substitute "V_{CB}".

TABLE I, subgroup 4, small-signal short-circuit, method 3216, delete applicable information and substitute,

"Conditions	Symbol	Limits (Max)	Unit
V_{CB} = 5 V dc; I_C = 5 mA dc; f = 1 kHz	h_{ob1}	.4	µohms
V_{CB} = 5 V dc; I_C = 1 mA dc; f = 1 kHz	h_{ob2}	.6	µohms"

TABLE I, subgroup 4, small-signal open-circuit, method 3211, symbol h_{rb1}, conditions column, delete "V_{CE}" and substitute "V_{CB}".

TABLE I, subgroup 4, small-signal open-circuit, method 3211, symbol h_{rb2}, conditions column, delete "V_{CE}" and substitute "V_{CB}".

PAGE 9

TABLE I, subgroup 4, input capacitance, symbol column, delete "C_{ibs}" and substitute "C_{ibo}"

TABLE I, subgroup 4, noise figure, limits, delete ".6" min column, and ".8" max column.

Custodians:
Army - CR
DLA - CC

Review activity:
Army - AR, AV, MI, SM

Preparing activity:
DLA - CC

(Project 5961-2331)